REMARKS

Claims 1-36 are currently pending in the subject application and are presently under consideration. Claim 7 has been amended to cure a minor informality as shown at pp. 2-6 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. Claim Objection

Claim 7 has been objected to for a minor informality. This has been corrected and the objection is thereby overcome with the subject amendment.

II. Rejection of Claims 1-18 and 36 Under 35 U.S.C. §101

Claims 1-18 and 36 stand rejected under 35 U.S.C. §101 as lacking utility. This rejection should be withdrawn for at least the following reasons. Claim 1 recites: ***a system that facilitates specifying and utilizing hardware functionality***. Independent claim 36 recites: ***a data packet that can pass between a plurality of computer processes***. The Examiner asserts that claims 1 and 36 lack utility because they are respectively drawn to software and a data packet. Applicants' representative avers to the contrary.

> Because the claimed process applies the Boolean principle [abstract idea] ***to produce a useful, concrete, tangible result*** … on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed. Cir. 1999) (Emphasis added); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been ***reduced to some practical application rendering it "useful***." *AT&T* at 1357 *citing In re Alappat*, 33 F.3d 1526, 31 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (emphasis added).
>
> This court must also decide whether software code made in the United States and exported abroad is a "component of a patented invention" under 271(f)... Section 271(f) refers to "components of a patented invention."...

> Title 35, section 101, explains that an invention includes "any new and useful process, machine, manufacture or composition of matter."... Without question, ***software code alone qualifies as an invention eligible for patenting under these categories***, at least as processes. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1338 (Fed. Cir. 2005) (emphasis added).

With respect to independent claim 1, it is noted that this claim relates to *a system that facilitates specifying and utilizing hardware functionality, comprising a common hardware register pseudo-language, the language comprising a set of primitives; and a specification component that specifies hardware functionality via the common hardware register pseudo-language.* Therefore, in view of at least the above, even if the claim could only be construed as software code, as contended by the Examiner, the claimed subject matter does in fact ***produce a useful, concrete, tangible result***, namely specifying and utilizing hardware functionality.

With respect to independent claim 36, it is understood in the art that a *data packet* encapsulates one or more transformation instructions that are transmitted from one computer process to another computer process. The fact that (i) the data packet encases the software code during its transmission between two processes, or (ii) the data packet is transmitted as a communication signal between two processes is irrelevant to the fact that it is software code that is contained therein and is being transmitted through utilization of a communication signal. It is submitted that all that is relevant is that software code is being transmitted within the data packet, and that the software code so transmitted produces a useful, concrete and tangible result.

In *AT&T*, the patent at issue described a message record for long-distance telephone calls that included a primary interexchange carrier ("PIC") indicator, which allowed for differential billing treatment for subscribers. (*See AT&T*, 172 F.3d at 1353). AT&T's claimed process applied Boolean algebra "to determine the value of the PIC indicator, and [applied] that value through switching and recording mechanisms to create a signal useful for billing purposes." (*See AT&T*, 172 F.3d at 1358). Relying on its holdings in *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 US 1093 (1999) and *Arrhythmia Research Tech. Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992), the Court held that the AT&T process was patentable subject matter:

> In *State Street*, we held that the processing system there was patentable subject matter because the system takes data representing discrete dollar

> amounts through a series of mathematical calculations to determine a final share price – ***a useful, concrete, and tangible result***. *See* 149 F.3d at 1373, 47 USPQ2d at 1601. In this case, Excel argues, correctly, that the PIC indicator value is derived using a simple mathematical principle (p and q). But that is not determinative because AT&T does not claim the Boolean principle as such or attempt to forestall its use in any other application. It is clear from the written description of the '184 patent that AT&T is only claiming a process that uses the Boolean principle in order to determine the value of the PIC indicator. The PIC indicator represents ***information*** about the call recipient's PIC, ***a useful, non-abstract result*** that facilitates differential billing of long-distance calls made by an IXC's subscriber. Because the claimed process applies the Boolean principle to produce a ***useful, concrete, tangible result*** without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of Section 101. *See Arrhythmia Research Tech. Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1060, 22 USPQ2d 1033, 1039 (Fed. Cir. 1992) ("That the product is numerical is not a criterion of whether the claim is directed to statutory subject matter."). *See AT&T*, 172 F.3d at 1358 (emphasis added).

In *Arrhythmia*, electrocardiograph signals were input into a computer and filtered and analyzed to determine the average magnitude of the signals. The resulting output signal was then compared to a predetermined level to determine whether the patient was at high risk for a particular arrhythmia. The Court found the claims patentable subject matter stating:

> The resultant output is not an abstract number, but is a ***signal*** related to the patient's heart activity. These claimed steps of "converting", "applying", "determining", and "comparing" are physical process steps that transform one ***physical, electrical signal*** into another. ***The view that "there is nothing necessarily physical about 'signals'" is incorrect.*** *In re Taner*, 681 F.2d 787, 790, 214 USPQ 678, 681 (CCPA 1982) (holding statutory claims to a method of seismic exploration including the mathematically described steps of "summing" and "simulating from"). . . . The computer-performed operations transform a particular input ***signal*** to a different output ***signal***, in accordance with the internal structure of the computer as configured by electronic instructions. "The claimed invention . . . converts one ***physical thing*** into another ***physical thing*** just as any other electrical circuitry would do". *Arrhythmia,* 958 F.2d at 1059, 1060 (citations omitted) (emphasis added).

In *State Street*, the Federal Circuit remarked upon its decision in *Arrhythmia* and noted that the transformation of electrocardiographic signals was patentable as "a practical application

of an abstract idea … because it corresponded to a useful, concrete or tangible thing – the condition of a patient's heart." (*State Street*, 149 F.3d at 1373). The Federal Circuit also remarked in *State Street* that:

> We note that, for the purposes of a Section 101 analysis, it is of little relevance whether [a claim] is directed to a "machine" or a "process," as long as it falls within at least one of the four enumerated categories of patentable subject matter . . . . *State Street*, 149, F.3d at 1373.

As noted *supra*, the Federal Circuit case law supports that carrier waves/signals fall within at least one of the four enumerated categories of patentable subject matter. The Federal Circuit has made clear that signals are physical things, (*See Arrhythmia,* 958 F.2d at 1059, 1060), and as such carrier signals/waves are not naturally occurring phenomena, but rather, manufactured signals which accordingly are patentable products of manufacture in and of themselves. Thus, as discussed in the specification, communication media such as carrier waves/signals are physical things and are useful and fall within the ambit of being classified as computer readable media. Consequently, the subject claim clearly meets the aforementioned legal standards set forth in *AT&T Corp. v. Excel Communications, Inc.*, *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, and *Arrhythmia Research Tech. Inc. v. Corazonix Corp.*

In view of at least the above, it is readily apparent that claim 1 recites a ***system*** and that claim 36 recites a ***data packet*** that ***produces concrete, tangible and useful results***, pursuant to *AT&T Corp. v. Excel Communications, Inc.* Accordingly, the rejection of independent claims 1 and 36 (and claims that depend therefrom) should be withdrawn.

III. Rejection of Claims 1-36 Under 35 U.S.C. §103(a)

Claims 1-36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Powell (U.S. 6,993,643) in view of Mayer ("XF_86_SVGA with S3 Cards" newsgroup post). Powell and Mayer, alone and in combination, do not disclose or suggest each and every limitation set forth in the subject claims.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria.

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) ***must teach or suggest all the claim limitations***. *See* MPEP §706.02(j). The ***teaching or suggestion to make the claimed combination*** and the reasonable expectation of success ***must be found in the prior art and not based on the Applicant's disclosure***. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Applicants' claimed subject matter relates to a system and method that specifies and utilizes hardware functionality. In particular, claim 1 recites ***a common hardware register pseudo-language*** that includes ***a set of primitives***. ***A specification component*** is provided ***that specifies hardware functionality via the common hardware register pseudo-language***. Independent claims 19, 25, and 36 recite similar limitations. Neither Powell nor Mayer, alone or in combination, disclose such claimed aspects.

Powell relates to a method and system for selecting appropriate resources for a hardware component of a computer system, *i.e.* dynamically selecting a video driver for a suitable monitor. Powell discloses detecting a hardware component during a boot process, and then dynamically making a copy of a symlink in RAM, which is selected for optimal operation of the detected hardware component (col. 3, lines 29-38). A second symlink is created during the boot process and dynamically modified to point to a correct server, so as to initialize that server from the boot CD (col. 3, lines 53-57). The Examiner cites the above passages against the present claims, and also a lengthy passage from col. 7, line 8 through col. 8, line 4, which provides details on how the symlink is loaded into RAM and can be dynamically changed to point to a server, for remote triggering of files. It is not clear how these teachings from the cited document relate to the claimed subject matter.

The Examiner states that, "Powell utilizes the XF86 configuration file to set the specific parameters of a particular video adapter/card of the data processing system." The Examiner then admits that, "Powell does not expressly disclose that a XF86 configuration file comprises a common hardware register pseudo-language having a set of primitives." By this admission, the Examiner implicitly acknowledges the unsuitability of the Powell reference, since these aspects

are recited in each of the subject independent claims, without which the Powell reference has little relevance.

The Examiner further states that, "However, Mayer clearly discloses that a XF86 configuration file is similar to a common hardware register pseudo-language having a set of primitives [pages 1-14]." The Mayer "reference" is simply a newsgroup post disclosing code that can presumably be used for writing a VGA driver. Other than the code itself, there are no specific teachings or suggestions to be extracted from this lengthy citation related to *a common hardware register pseudo-language*, as recited in the claims. Therefore, there is clearly no motivation to combine these references. One could not start with these references alone and arrive at the claimed subject matter without considerable experimentation. Indeed, one seeking to modify Powell, guided by Mayer, would need to write software code from scratch, and all the attendant considerations associated with software development. It is readily apparent that one reading these references would not be led to the claimed subject matter unless guided by a 20/20 hindsight reading of the subject disclosure.

But even if these references could be combined in the manner proposed by the Examiner, they would still fail to show a *system and method that specifies and utilizes hardware functionality* employing ***a common hardware register pseudo-language*** that includes ***a set of primitives*** and also ***a specification component that specifies hardware functionality via the common hardware register pseudo-language***. It is therefore respectfully submitted that the Examiner has not established a *prima facie* case of obviousness with respect to the subject claims. In view of at least the foregoing, the rejection of independent claims 1, 19, 25, and 36 (and claims which depend therefrom) should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP460US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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